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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/551,740 | 09/30/2005 | Alexander Ralph Beeck | 2002P19478WOUS | 4282 |

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

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| EXAMINER |
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SANDERS, JAMES M

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| ART UNIT | PAPER NUMBER |
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1791

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03/16/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|----------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------|--|
| <p align="center">Advisory Action Before the Filing of an Appeal Brief</p> | <p>Application No. 10/551,740</p> | <p>Applicant(s) BEECK ET AL.</p> | |
| | <p>Examiner JAMES SANDERS</p> | <p>Art Unit 1791</p> | |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 09 March 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 1791

Continuation of 11. does NOT place the application in condition for allowance because: Applicant asserts that on the one hand, the Examiner has conceded that Deckard fails to disclose a first and second powder mix differing from each other in chemical composition or powder particle size distribution (Office Action, p. 3), and cited to Sachs et al. as providing this noted deficiency, namely, "the first and second powder mixes differing from each other in at least one of chemical composition and powder particle size distribution" (Office Action, p.3); on the other hand, the Examiner somehow rejects that the teaching of Sachs et al. implementing this modification (of layering the first and second powder mixes with the dispersion head and binder material) would even be implemented in the modified Deckard. Such inconsistent reasoning underscores the fundamental unsoundness of the Examiner's reasoning and the modified version of Deckard would render Deckard unsatisfactory for its intended purpose and would not involve the use of a laser sintering process, and thus the rejection of independent claim 17 is fatally deficient. Examiner, however, maintains, as cited in the rejection of claim 17, that Sachs et al. teach a second powder mix in a second region, the first and second powder mixes differing from each other in at least one of chemical composition and powder particle size distribution and the combination of the Deckard reference is with only this element of and not the whole of the Sachs et al. reference and there is no teaching away involved with this element, and thus would not render Deckard unsatisfactory for its intended purpose.

Applicant further asserts that Examiner mischaracterizes the Deckard and Sachs et al. references, presuming that one of ordinary skill in the art would somehow develop a method of: (1) applying a layer of first and second powder from a first and second dispersion head, and (2) use the laser 12 of Deckard in some fashion with these applied powder layers. Neither Deckard nor Sachs et al. teaches any such arrangement or method. As discussed above, the only layering method of powder involving the application of powder from the dispersion head also involves a successive application of a binder material in between the successive layers, and thus, there is insufficient teaching as to why one of ordinary skill in the art would unnecessarily use the laser 12 to form layers in the powder, when the dispersion head/binder material process has already formed layers. Examiner, however, points out that a fundamental concept of Deckard is the build up of a part in a layer-by-layer manner, and Deckard teaches a portion of powder 22 is deposited in the target area 26 and selectively sintered by the laser beam 64 to produce a sintered layer (cl 5 lns 55-67). Further, the powder dispenser 14 is supplied by a hopper 20 (cl 4 lns 40-41). Since Sachs et al. teaches that the first and second powders are individually applied from separate dispersion heads, another dispersion head would be added for the second powder. Clearly, one of ordinary skill would also, while depositing the first and second powders of a layer, move the dispersion heads in such a way so as not to interfere with the performance of the laser, optics, and thus the sintering process.

Finally, Applicant asserts that Lewis et al. merely discloses a melting process, and thus teaches away from a sintering process, which is a method for making objects from powder by heating the powder to below its melting point until the particles adhere to each other and Examiner merely pointed to a teaching of Lewis et al., which discloses that varying laser power causes less melting, which in-turn reduces density and stated that it is inherent that powder particles not melted adhere to each other. This teaching provides no basis in fact or reasonable support for the Examiner's inherency claim and neither Lewis et al., nor any cited prior art reference, alone or in combination, discloses that the respective first/second laser sintering is controlled to provide different material properties in the first and second regions of the shaped object, as recited in independent claim 17. Examiner, however, maintains that incomplete melting is equivalent to sintering and points out that there at least two types of sintering: solid state sintering is a method for making objects from powder by heating the material below its melting point and liquid state sintering is a method in which at least one but not all of the elements exist in a liquid state. Examiner finds no where in claim 17 that it is limited to only solid state sintering. Further, Lewis et al. teach controlling a laser beam generated during the first and second laser sintering processes to produce a different sintering temperature over the first and second regions of the object creating a different degree of densification in the first and second regions of the shaped object. (cl 22 lns 1-5 i.e. An article whose density varies, that is, has different densities at different locations, may be formed by varying laser power...Decreasing laser power results in less melting of the powder, thus reducing density).